



## PATENT ABSTRACTS OF JAPAN

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TSUKAMOTO AKIRA****(54) METHOD OF MANUFACTURING JOSEPHSON  
DEVICE HAVING RAMP EDGE STRUCTURE AND  
FILM-FORMING DEVICE****(57) Abstract:**

**PROBLEM TO BE SOLVED:** To provide a ramp edge type Josephson device having fewer variations in device parameter.

**SOLUTION:** Since two-step cleaning is carried out in different conditions to remove a deteriorated layer on a ramp edge surface, a flat and even ramp edge surface is formed. Since the ramp edge surface undergoes ion irradiation and a heat treatment, a surface modified layer is formed. As for thermal conduction to a substrate in the heat treatment, thermal conduction in a vapor phase is used to equalize temperature distribution in the substrate.

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